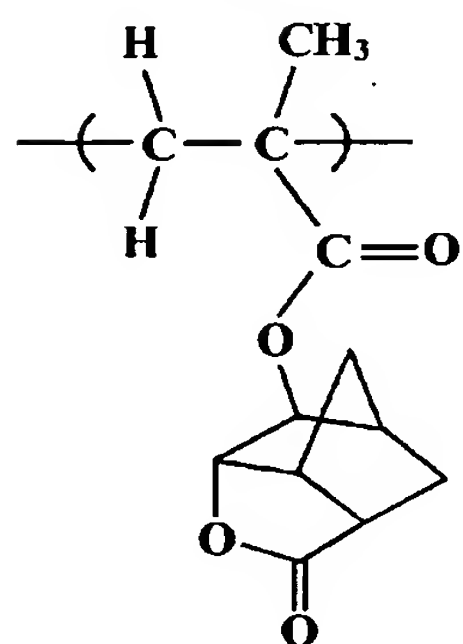


## CLAIMS

1. (Amended) An acrylic copolymer comprising:

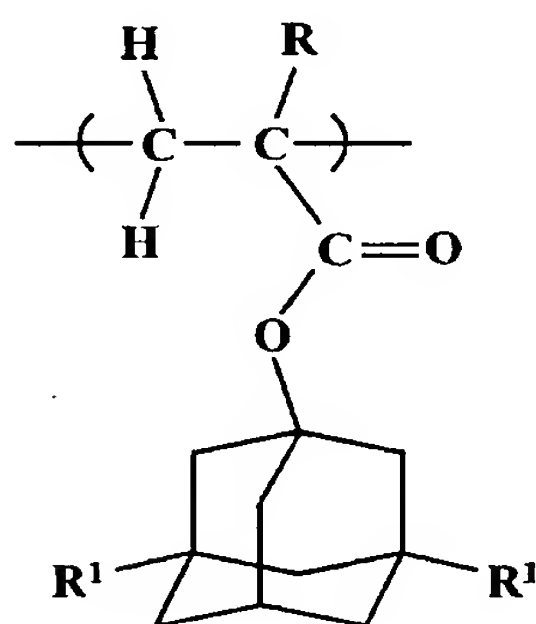
a recurring unit of the following formula (1),



(1)

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a recurring unit of the following formula (2),

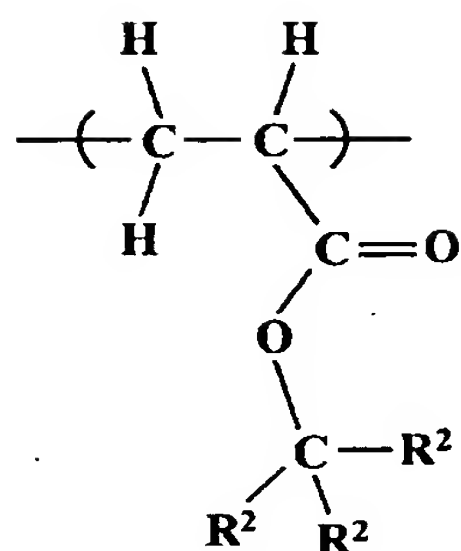


(2)

wherein R represents a hydrogen atom or a methyl group; R<sup>1</sup> individually represents a hydrogen atom, hydroxyl group, or -COOR<sup>3</sup> group, wherein R<sup>3</sup> is a hydrogen atom, a

10 linear or branched alkyl group having 1-4 carbon atoms or an alicyclic alkyl group having 3-20 carbon atoms, provided that at least one of R<sup>1</sup> groups is not a hydrogen atom, and

a recurring unit of the following formula (3),



(3)

wherein any two of  $\text{R}^2$  groups form, in combination and together with the carbon atom to which the two  $\text{R}^2$  groups bond, a divalent alicyclic hydrocarbon group having 4-20 carbon atoms or a derivative thereof, with the remaining  $\text{R}^2$  being a linear or branched alkyl group having 1-4 carbon atoms, a monovalent alicyclic hydrocarbon group having 4-20 carbon atoms, or a derivative thereof.

2. A radiation-sensitive resin composition comprising an acid-labile group-containing resin which is insoluble or scarcely soluble in alkali, but becomes alkali soluble by the action of an acid, and a photoacid generator, wherein the acid-labile group-containing resin is the acrylic copolymer according to claim 1.

3. The radiation-sensitive resin composition according to claim 2, wherein at least one  $\text{R}^1$  group in the formula (2) is a hydroxyl group

4. The radiation-sensitive resin composition according to claim 2, wherein the group  $-\text{C}(\text{R}^2)_3$  in the formula (3) is at least one group selected from the group consisting of a 1-methyl-1-cyclopentyl group, a 1-ethyl-1-cyclopentyl group, a 1-methyl-1-cyclohexyl group, and a 1-ethyl-1-cyclohexyl group.

5. The radiation-sensitive resin composition according to claim 2, wherein the acid-labile group-containing resin comprises the recurring unit (1), recurring unit (2), and recurring unit (3) at a molar ratio (mol% of the total recurring units) of 20-70: 5-40: 20-50.

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6. The radiation-sensitive resin composition according to claim 2, wherein the photoacid generator comprises at least one compound selected from the group consisting of a triphenylsulfonium salt compound, a 4-cyclohexylphenyldiphenylsulfonium salt compound, a 4-*t*-butylphenyldiphenylsulfonium salt compound, and a tri(4-*t*-butylphenyl)sulfonium salt compound.

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7. The radiation-sensitive resin composition according to claim 2, wherein the amount of photoacid generator is 0.1-7 parts by weight for 100 parts by weight of the acrylic copolymer.

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8. The radiation-sensitive resin composition according to claim 2, further comprising an acid diffusion controller, wherein the acid diffusion controller is a nitrogen-containing organic compound.

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9. The radiation-sensitive resin composition according to claim 2, wherein after post exposure baking the size of contact hole patterns is reduced at an excellent precision by post development baking.

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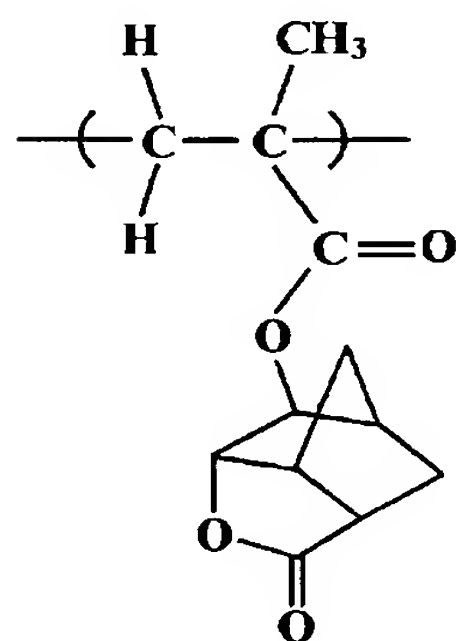
10. (Added) The radiation-sensitive resin composition according to claim 2, wherein any two of  $R^2$  groups in the formula (3) of the acid-labile group-containing resin form, in combination and together with the carbon atom to which these  $R^2$  groups bond, a divalent monocyclic alicyclic hydrocarbon group having 4-20 carbon atoms or a

derivative thereof, with the remaining  $R^2$  group being a linear or branched alkyl group having 1-4 carbon atoms, a monovalent alicyclic hydrocarbon group having 4-20 carbon atoms, or a derivative thereof.

- 5            11. (Added) The radiation-sensitive resin composition according to claim 10, wherein the divalent monocyclic alicyclic hydrocarbon group having 4-20 carbon atoms is a cyclopentyl group or a cyclohexyl group.

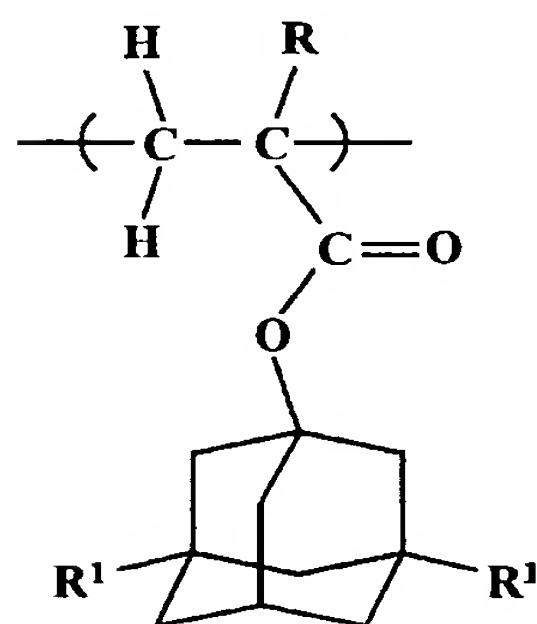
12. (Added) An acrylic copolymer consisting essentially of:

- 10    a recurring unit of the following formula (1),



(1)

a recurring unit of the following formula (2),

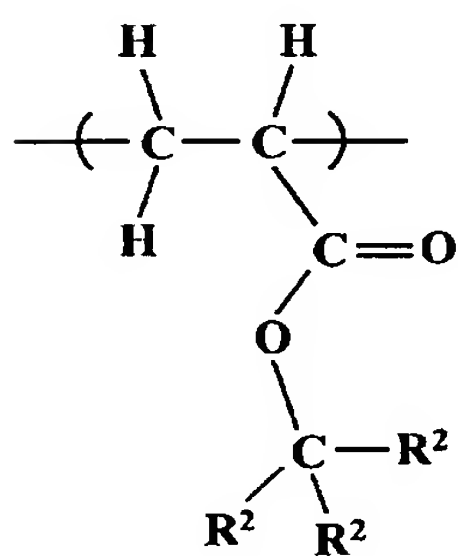


(2)

wherein R represents a hydrogen atom or a methyl group;  $R^1$  individually represents a

hydrogen atom, hydroxyl group, or  $-\text{COOR}^3$  group, wherein  $\text{R}^3$  is a hydrogen atom, a linear or branched alkyl group having 1-4 carbon atoms, or an alicyclic alkyl group having 3-20 carbon atoms, provided that at least one of  $\text{R}^1$  groups is not a hydrogen atom, and

5 a recurring unit of the following formula (3),



(3)

wherein any two of  $\text{R}^2$  groups form, in combination and together with the carbon atom to which the two  $\text{R}^2$  groups bond, a divalent alicyclic hydrocarbon group having 4-20 carbon atoms or a derivative thereof, with the remaining  $\text{R}^2$  being a linear or branched

10 alkyl group having 1-4 carbon atoms, a monovalent alicyclic hydrocarbon group having 4-20 carbon atoms, or a derivative thereof.